

Safety, Health, Environmental and Mission Assurance Personnel Requirements

1. SOW sec 3.1 Operational Safety- Anticipated Work Year Equivalent is 8

Position	Position Description and Requirements
Safety Engineer	Support the implementation of Safety Programs described in Section 3.1 by providing engineering analysis associated with the anticipation, identification, and evaluation of hazardous conditions in designs, systems, processes or facilities. Design and recommend controls, methods, and procedures to effectively mitigate or control hazardous conditions. Safety Engineers should have a minimum of 5 years of Safety, Health and Environmental (E,S&H) experience and, at minimum, possess a Bachelor's degree in an Engineering or E,S&H area of expertise. Certification as a Certified Safety Professional (CSP) is desirable.
Safety Specialist	Support the implementation of Safety Programs described in Section 3.1 by providing the ability to evaluate, audit, measure, implement, and administer Safety and Occupational Health Programs in an industrial, construction, or Laboratory workplace environment. Plan and implement controls to effectively mitigate or control hazardous conditions. Safety Specialists should have a minimum of 5 years of Safety, Health and Environmental (E,S&H) experience. Certification as a Certified Safety Professional (CSP) or Associate Safety Professional (ASP) or an equivalent qualification is desirable.

2. SOW sec 3.2 Occupational Health- Anticipated Work Year Equivalent is 8

Position	Position Description and Requirements
Industrial Hygienist (IH)	Support the implementation of industrial hygiene programs, and, occupational health support to other Center functions as described in the Statement of Work section 3.2. IH's shall have a 4-year degree from an appropriately accredited college or university in a curriculum, or, with the course work necessary that satisfies the American Board of Industrial Hygiene requirements to be qualified as a Certified Industrial Hygienist. Collectively, these IH's shall have at least ten (10) years of total relevant experience working as industrial hygienists. CIH certification of at least one (1) other IH is preferred. Work experience at the Glenn Research Center is preferred.
Senior Industrial Hygienist	Certified by the American Board of Industrial Hygiene as a Certified Industrial Hygienist (CIH), each with at least ten (10) years of work experience as an industrial hygienist working in various work environments, including research. At least two (2) of the ten (10) years of experience shall have been at the NASA Glenn Research Center.
Additional IH Experience Requirements:	At least one (1) IH shall have at least five (5) years of experience and competency in performing Indoor Air Quality (IAQ)/Indoor Environmental Quality (IEQ) assessments and be knowledgeable about HVAC and local exhaust systems. At least one (1) IH shall be knowledgeable of construction safety and have at least two (2) years of experience and competency in supporting

	<p>industrial hygiene-related tasks associated with construction activities. Collectively, all IH's shall have demonstrated experience in managing relevant databases supporting occupational health programs; shall have appropriate licensing, when required, to implement programs involving specific hazardous materials (e.g., asbestos); shall have experience using the field instrumentation relevant to the position. (see list of IH government-furnished equipment). Experience and competency in the MEDGATE Occupational Health and Safety software application is preferred.</p>
Chemical Management/Chemical Hygiene Professional	<p>Support the Implementation of hazard communication and chemical hygiene programs, and, occupational health support to other Center functions as described in Section 3.2 of the Statement of Work. At least one shall have their Chemical Hygiene Officer (CHO) certification from the National Registry of Certified Chemists. Certified Hazardous Materials Management (CHMM) of at least one person is preferred.</p> <p>At least one shall have at least five (5) years of experience and competency in working in chemical management and chemical hygiene/hazard communication at a research facility, including at least two (2) years at the Glenn Research Center. Collectively, these persons shall have experience and competency in conducting chemical safety inspections and shall have experience and competency with the implementation of Homeland Security reviews and requirements for hazardous materials/chemicals.</p>
Occupational Health Technician	<p>Provide various laboratory and field activities which support the industrial hygiene and health physics programs as described in the Statement of Work. Typical activities could include logistics management, equipment calibration and coordination thereof, field sampling and surveillance, PPE selection, respirator fit-testing, ventilation surveys, site and equipment inspections, and inventorying hazardous materials/equipment. OH Technician shall, at a minimum, have an Associate's Degree in a health and safety, or, technical or scientific discipline. Alternately, an OH Technician may have sixty (60) semester hours of college-level education, including at least twenty eight (28) semester hours in science and/or math disciplines. An OH Technician shall have at least two (2) years of relevant work experience in the field of industrial hygiene and/or health physics.</p>
Chemist/Laboratory Manager	<p>Management and operation of the chemistry laboratory described in section 3.2.1 of the Statement of Work as well as management of the industrial hygiene laboratory. The equipment for both functions is described in the government-furnished property list. The Chemist/Laboratory Manager shall have at least a 4-year degree in chemistry</p>

	from an Accreditation Board for Engineering and Technology (ABET) accredited college or university. The Chemist/Laboratory Manager shall have at least five (5) years of relevant experience and competency in processing samples as described in section 3.2.1 of the statement of work.
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3. SOW sec 3.3 Energy and Environment- Anticipated Work Year Equivalent is 6

Energy and Environment (Section 3.3 of the SOW) requires Contractor staffing to develop, implement, support and ensure regulatory compliance with Waste Management programs, Stormwater Management programs, Storage Tank programs, Natural Resource Management programs, EMS, Outreach Activities and Environmental Sampling and Analysis.

Proposed Energy and Environment staff should be at a minimum versed in multiple Energy and Environmental program areas and able to support the management of all program areas.

Using US Office of Personnel Management (OPM) Job Classifications as a guide, <http://www.opm.gov/fedclass/html/gsseries.asp> Contract positions shall be staffed with the equivalent Engineers(800 series), Environmental Engineers (0819), Environmental Protection Specialists (0028), Environmental Technicians and/or persons with equivalent applicable education, training and a minimum of 5 years of work experience. There is an expectation that all Engineers, Specialists and Technicians will support all functions in all program areas including Outreach and that Engineers and Specialists will be capable of managing tasks and program areas with or without Civil Servant oversight.

The Contractor staff shall have a minimum of 2 years of experience (NASA Glenn Research Center experience is preferred) implementing Energy and Environmental programs and/or performing tasks similar to those described in Sec. 3.3 of the SOW. Any management staff proposed in support of Sec. 3.3 of the SOW shall have a minimum of 5 years of relevant management experience and a degree in engineering, environmental science or equivalent business management degree.

At a minimum, all Contractor Staff will be required to begin with regulatory required training to perform the tasks. The Contractor staff shall have and maintain currency in the regulations and regulatory changes affecting GRC's Energy and Environmental programs As such the Contractor Staff shall:

- Have and maintain currency with applicable Solid and Hazardous Waste regulatory requirements
- Have and maintain current Resource Conservation and Recovery Act (RCRA) and U.S. Department of Transportation (DOT) Training
- Have and maintain OSHA 29 CFR - Hazardous Waste Operations and Emergency Response (HazWOpER) Training
- Be trained, qualified and experienced in performing RCRA site inspections and RCRA waste management
- Be trained and qualified in use of cranes and rigging
- Be trained and qualified in access and working in confined spaces
- Be trained and qualified in use of fall protection
- Have and maintain training in the use of the Incident Command System (ICS) and have experienced in responding to environmental spills

(Please note that these are the minimum starting requirements and that additional environmental, health, safety and security training will be required during contract performance)

4. SOW sec. 4 Aero/Space Systems and Ground Support Equipment Mission Assurance – IDIQ

The following table 4.a contains anticipated functional positions required under the Aero/Space Systems and Ground Support Equipment Mission Assurance IDIQ. The minimum qualifications for staffing these functional positions are described in table 4.b

Table 4.a

Anticipated Functional Positions	Position Descriptions
System Safety Engineer	Responsible for performing & evaluating system safety analyses for expendable & reusable launch vehicles, spacecraft, aircraft, & flight payloads. Evaluates these vehicle/craft design & operations data to ensure that systems & processes satisfy NASA requirements.
Continuous Risk Management (CRM) Facilitator	Facilitates the set of activities aimed at achieving success by proactively risk-informing the selection of decision alternatives & then managing the implementation risks associated with the selected alternative. Uses the techniques/methods found in Carnegie Mellon's "Continuous Risk Management Guidebook" and NASA NPR 8000.4A "Agency Risk Management Procedural Requirements."
Electronic, Electromagnetic, & Electrical (EEE) Parts Engineer	Provide Electrical, Electronic & Electromagnetic (EEE) parts support to flight projects. Determine the viability of proposed component parts for flight applications, recommend replacement parts, assist in EEE parts failures & review DOD, industry, & NASA EEE parts specifications, standards & studies for application to NASA programs.
Materials and Processes (M&P) Engineer	Support NASA flight programs to ensure hardware design & product assurance requirements are achieved within cost & schedule constraints. Interface with program management, customers, suppliers & engineering on M&P related issues for flight programs. Participate in engineering, design & qualification test reviews, & prepare M&P presentation packages as required for reviews. Identify any materials & process related issues or potential risks & provide assessment to engineering
Quality Assurance (QA) Engineer	Ensures work is accomplished in accordance with all required NASA standards and requirements. Evaluates the methods used to sample, test or inspect products & makes improvements in the process. Audits & analyzes inspection & testing data to find areas that require improvement. The QA engineer uses the information from testing & inspection reports to investigate the cause of defective products.

Software Assurance Engineer	Ensures work is accomplished in accordance with all required NASA standards and requirements. Participates in the design process to understand how the software will function. Evaluates & test software applications for usability & functionality. Audits & analyzes inspection & testing data to find areas that require improvement.
Reliability and Maintainability (R&M) Engineer	Perform reliability analysis (Availability, MTBF, MTTR) of flight & ground equipment, & recommend areas for improvement. Experienced use of Reliability Tools (FMEA's, FTA's, RCM, etc.) for flight and ground equipment. Interface with Program Management and suppliers to troubleshoot & resolve issues related to R&M procedures & expectations.

For any of the required functional positions listed above, the minimum qualifications are provided below: Table 4.b

Position	Minimum Requirements
Senior Engineer	At least a 4 year Bachelor's degree from an ABET accredited institution of higher learning. ≥ 5 years experience required.
Junior Engineer	At least a 4 year Bachelor's degree from an ABET accredited institution of higher learning 0 to 5 years experience required.
Certified Welding Inspector (CWI)	American Welding Society Welding Inspector Certification. ≥ 3 years experience required.
Nondestructive Evaluation (NDE)	Completion of related classroom training in accordance with ASNT SNT-TC-1A (American Society for Nondestructive Testing). ≥ 3 years experience required.
ISO/AS9100 Quality Systems Auditor	At least a 2 year degree from an ABET accredited institution of higher learning. Experience as an Internal or External ISO Auditor and ability to engage and support 2nd & 3rd party auditors. ≥ 3 years experience required.
Software Assurance Engineer	At least a 4 year Bachelor's degree from an ABET accredited institution of higher learning. Proficient with Capability Maturity Model Integration (CMMI) Level 2 or higher. ≥ 3 years experience required.
Risk Management Trainer	At least a 2 year degree from an ABET accredited institution of higher learning. Practitioner of Risk Management with expertise in Carnegie Mellon's "Continuous Risk Management Guidebook." ≥ 4 years experience required.